

Name \_\_\_\_\_ Date \_\_\_\_\_ Hour \_\_\_\_\_

### Chapter 3 Practice Test

#### 3.1 Solving Equations Using Addition and Subtraction (2 points each)

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Solve each equation. **SHOW ALL WORK!**

1.  $-8 + n = -3$

2.  $19 - (-y) = 25$

3.  $-21 = -|-3| - x$

#### 3.2 Solving Equations Using Multiplying and Dividing (2 points each)

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Solve each equation. **SHOW ALL WORK!**

4.  $288 = -16a$

5.  $\frac{-4}{5}c = 75$

6.  $\frac{2}{3}m = \frac{-1}{9}$

**Write AND solve an equation to answer question 7 & 8. (3 points each)**

7. Each U.S. household receives about 676 pieces of junk mail per year. About how many pieces of junk mail would a household expect to receive per week?

8. Julia ran high school track in 2006 and 2007. Her overall score in 2007 was 7044 points. This was 247 fewer points than her 2006 overall score. What was her 2006 overall score?

### 3.3 Solving Multi-Step Equations (3 points each)

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Solve each equation. SHOW ALL WORK!

9.  $10x + 4(x - 3) = 16$

10.  $8m - (4m + 2) = 2m - 8$

11.  $17 = 2(3n + 1) - n$

12.  $\frac{-4}{9}(2c - 4) = 48$

13.  $3 - \frac{3}{4}e = -6$

14.  $9y - 5(3y - 12) = 30$

### 3.4 Solving Equations with Variables on Both Sides (4 points each)

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Solve each equation. SHOW ALL WORK!

15.  $3(4 + 4w) = 12w + 12$

16.  $5(r - 2) = -2(12 - 9r) + r$

17.  $-2(6 - 10h) = 10(2h - 6)$

18.  $12v - 4 = 12v$

19.  $10(2 - x) + 4x = 3(5x + 1) - 2$

20.  $\frac{1}{2}(12 - 2x) - 4 = 5x + 2(x - 7)$

### 3.7 Formulas and Functions (2 points each)

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Rewrite each equation so that  $y$  is a function of  $x$ .

21.  $3x + y = 4$

22.  $y - 7 = -2x$

23.  $3(x - 2y) = -12(x + 2y)$

Solve for the indicated variable.

24.  $v = r^2h$  (solve for  $h$ )

25.  $P = 2L + 2W$  (solve for  $L$ )

26.  $m = 2a - c$  (solve for  $c$ )

### 3.8 Finding Rates, Ratios, and Percents (2 points each)

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Find the unit rate.

27. 255 miles with 13 gallons

28. \$8.95 for 2.25 lbs

29. A waiter usually receives 15% of the total bill as a tip. To earn a total of \$30 in tips, about how much would he/she need to sell?

Find the percent of each. Round answers to the nearest hundredth.

30. What is 48% of 680?

31. 12 is what percent of 240?

32. 30 is 45% of what number?

33. 125 is what percent of 500?